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ABSTRACT

In 1989, a study was conducted to explore career-vocational faculty members' perceptions of students and of elements which would improve articulation between secondary schools and community colleges. The study also involved surveys of community college chief executive officers (CEO's), high school principals, and Regional Occupational Programs and Centers (ROP/C) directors regarding the leadership qualities needed to provide an optimum career-vocational teaching and learning environment. The study sample included 25 California community colleges and 263 high schools and ROP/C's; 24 colleges, 230 high schools, and 27 ROP/C's participated. Survey responses were received from 762 college instructors, 1,073 high school instructors, 164 ROP/C teachers, 18 college CEO's, 136 high school principals, and 23 ROP/C directors. Study results included the following: (1) high school and college faculty agreed that career-vocational students lacked basic skills, analytical skills, study skills, self-motivation, self-esteem, and family support; (2) barriers to effective instruction included cultural and economic differences among students, lack of interdisciplinary cooperation among faculty, and lack of cooperation between high school faculty and community college faculty; and (3) community college CEO's, high school principals, and ROP/C directors agreed that the institution's lead officer should emphasize the worth and value of career-vocational programs, take responsibility for creating formal articulation councils among and between educational institutions, and consider reorganizing the current college/high school administrative structure to ensure strong industry relations and to promote high school liaison activities and projects. (WJT)

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Community College Issues

Articulation and Economic Development

A Blueprint for Action - California's Secondary Educational Institutions and Community Colleges

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CACC

Commission on Instruction

Task Force on Articulation

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Volume 2, Number 2
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ARTICULATION AND ECONOMIC DEVELOPMENT. A BLUEPRINT FOR ACTION — CALIFORNIA'S SECONDARY EDUCATIONAL INSTITUTIONS AND COMMUNITY COLLEGES

California Association of Community Colleges
Commission on Instruction
Task Force on Articulation

In Collaboration With
The California State Department of Education
and
The California Community College Chancellors Office

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Barbara Mertes
February, 1990

EXECUTIVE SUMMARY

Published by the CACC Press, this paper is the fourth in a series concerning Articulation. This study reports the findings of the California Association of Community Colleges (CACC) Commission on Instruction's Articulation Task Force.

Major Question Addressed in the Study: In order for California to become a dominant force in the world's economic market, what are the most feasible articulation processes that should be implemented between California's secondary education institutions and community colleges in order to produce better prepared candidates for the California work force?

Purpose of the Study: The principal focus of the study centers on career-vocational faculty's perceptions of students and of those elements which will improve the cooperative working relationship between secondary school institutions and community colleges. A secondary aspect of the study involves the perceptions of community college chief executive officers (CEOs), high school principals, and Regional Occupational Programs and Centers (ROP/C) directors as these relate to the identification of specific leadership qualities needed to provide an optimum teaching-learning environment for career-vocational faculty and students.

Study Population: Twenty-five (25) community colleges were selected to participate in the study. The colleges selected to participate collectively comprise a representative sample of colleges within the California Community College System. A conscious effort was made to sample colleges of differing sizes, economic resources, demographic profiles, and geographical location.

The 25 participating colleges identified those high schools and regional occupation centers operating within each of their respective service areas. Those secondary school institutions, along with the community colleges, created the base population for the study.

Number of Respondents: Of the 25 community colleges selected for participation in the study, 24 (96%) of the colleges responded. Of the 263 high schools-ROP/C's identified for the study, 230 high schools (98.7%) and 27 ROP/C's (90%) participated in the study.

The total number of community colleges career-vocational faculty participating in the study was 762 ,while 1,073 high school faculty and 164 ROP/C faculty responded to the survey.

Eighteen (18) community college CEO's (78%) completed the leadership survey instrument; 136 high school principals (58%) and 23 ROP/C directors (90%) responded to the leadership survey.

Results of the Study: Community college faculty tend to share many of the same perceptions as do their secondary school colleagues. Their difference in perceptions may be based on their own learning-teaching environment, the degree of their direct involvement with the labor market, with the business-industry complex, and with the age and background of their student clients.

1. Faculty from both segments agree that the level of educational preparation of their students in career-vocational education is lacking in reading/writing skills, in mathematics/computational skills, in analytical skills, in study skills, in student motivation, in student self-esteem, and in family support of students involved in the programs.

2. Faculty from both segments agree that the following elements present "limited barriers" to their providing effective instruction in career-vocational education: cultural differences among students, economic differences among students, administrative support for their programs, lack of interdisciplinary cooperation among faculty on their campuses, lack of cooperation between faculty at high school and community colleges, and lack of cooperation with or support from business and industry.

Community college faculty suggest that students with limited English language fluency present a strong barrier to effective instruction, and secondary school faculty feel that their strongest barrier to offering effective instruction is that their courses are not made available to a wide range of students. In the opinion of faculty, student choice is hampered because the institution places a higher value on "academic" courses than it does on career-vocational education programs.

3. Faculty from community colleges see an overall growth in the number of career vocational program options available to their students, an increase in over-all student enrollment in career-vocational education programs, and an increase in the range of course offerings, both in types of programs and in the depth of these offerings. They believe that this increase in career-vocational programs and student enrollments is directly related to labor market demands. On the other hand, secondary school faculty perceive a sizable decrease in program options, student enrollments, and in the range and depth of course offerings. The faculty attribute these decreases to the change in high school graduation requirements and to the lack of flexibility in their schools' class schedules. Students are not afforded the opportunity to enroll in career-vocational education.

4. Both community college faculty and secondary school faculty perceive that their respective institutions can help remove current barriers that hinder effective teaching in career-vocational courses:

   - improve the process for and the quality of program materials disseminated to students and their families;
   - provide more effective special programs to support the learning process for "at-risk" students;
   - provide new and/or update current teaching materials, equipment, and facilities;
   - create formal articulation councils between community colleges and secondary school institutions;
   - develop stronger working partnerships with community advisory committees;
   - share resources,both equipment and facilities, provided by local business and industries.

   In addition, community college faculty suggest that their institutions provide more ESL (English as a Second Language) courses and that these courses be placed in accessible and attractive time slots in the class schedule. Secondly, community college faculty believe that financial aid programs should be made more visible and convenient for their students.

Community college CEO's, high school principals, and ROP/C directors share similar perceptions regarding leadership qualities most likely to improve the teaching-learning environment of career-vocational faculty and students.

1. The institution's lead officer should, by both policy and practice, place a high priority on the worth and value of career-vocational education programs. Career-vocational education programs and transfer-oriented programs should have equal status within an institution, and students should have the opportunity to explore both options before making a career commitment.

2. The institution's lead officer should take the responsibility for creating formal articulation councils among and between educational institutions.

3. The institution's lead officer should take the responsibility for working directly with business, government, and industry entities in order to form a strong working partnership between the institution and the

community's economic base. This partnership would involve the sharing of valuable resources.

4. The institution's lead officer should take the initiative for promoting staff development programs; seek special project funding to underwrite expensive equipment acquisitions; encourage strong working relationships with community advisory committees; and integrate the career-vocational programs with other educational programs offered in the institution.

5. The institution's lead officer should provide the process by which faculty who teach the same discipline in each segment have the opportunity to meet together in order to design a curriculum continuum for students, thereby encouraging high school students' transfer to community colleges.

6. The institution's lead officer should encourage the formation of 2+2(+2) models, and make sure that these models include academic skills components and student assessment processes.

7. The institution's lead officer should consider reorganizing the current college/high school administrative structure in order to create coordinator positions that will ensure strong industry relations, promote high school liaison activities and projects, and facilitate special programs affecting the development of handicapped students for successful participation in the labor force.

Conclusion: While the respondents from community colleges differ slightly from those perceptions suggested by high school respondents regarding what needs to be accomplished in developing stronger working relationships between the two segments, both segments agree that the working partnership must be accelerated. Implementation will require both the development of appropriate policy guidelines and the infusion of additional state funding.

Both the current and future success of California's economic development is highly dependent on the creation of a skilled work force. Career-vocational programs offered by community colleges and secondary school institutions are among the most important educational resources for the preparation of these workers.

The California work force situation has reached a crisis status. The solution lies with aggressive leadership at both the state and local level, a leadership that is visionary, compassionate, and sensitive to faculty and student development, and ultimately, committed to the future of California. Economists and social critics suggest that the 21st Century actually began in 1984. If this assumption is true, then the need to accelerate the development of strong working relationships between community colleges and secondary schools in order to ensure California's economic development is long overdue. The information gained from this unique study suggests a direction, a blueprint, for action.

I. INTRODUCTION

One of the most critical challenges facing California's community colleges and secondary school institutions is the development of a talented, productive work force to supply the demands of the state's rapidly growing economy. The solution to this crisis focuses directly on the quality of students, faculty, curricula, style of leadership, and institutional support afforded within the educational institutions; the workability of the solution is undergirded by the strength and quality of working relationships between the state's two largest public education entities and with those of business, government, and industry.

The preparation of California's work force is a huge and complex task; it is affected by several conditions and forces existing outside the control of public education; yet, these forces have a direct effect on the fruition and ultimate success of the mission of these institutions.

First, the growth of California's economy continues to advance without restraint. Currently, California's economy is the sixth largest in the world; by the turn of the century, California's economy is projected to be the fourth largest after Japan, the Soviet Union, and the total United States. This economy will be based on the products of a highly mechanized, technological industrial complex created by a sophisticated work force who will demand a quality of life supported by substantial human services.

Second, the changes within California's population are nearly out-stripping, in number and complexity, its advancing economic growth. The infusion of immigrant and of other minority groups require that California reexamine its educational policies and instructional delivery systems. The greatest challenge given to public education will be to strengthen both quality and equity. Can California's major public educational systems maintain the high quality of their programs as they continue to serve a multicultural, diverse, and often inadequately prepared student clientele? And who will bear the costs?

Third, there are the perceived effects of statewide educational reform. In the perception of many, the reforms have concentrated on the advancement of the university-bound student. With this emphasis, the critics state, has come a reduction in emphasis on career-vocational educational programs and a corresponding drop in student enrollments. This effect is most severe in secondary school institutions, although several community colleges had witnessed similar program reductions during the day, and enrollment drops of recent high-school graduates. In addition, many of the students enrolled in career-vocational programs at community colleges and secondary school institutions have been generally described as being inadequately prepared academically and poorly motivated.

A concomitant effect which critics attribute to the secondary school reform movement is the increasing rate of high school student drop-outs. This assessment may be unfair. However, the statewide drop-out rate nears the 25% mark; in urban center schools, it is closer to 50%. Whether or not educational reform has contributed to the drop-out rate is a moot point. The real concern lies in the reality of the loss of valuable and potential human resources, people whose futures will probably be neither productive nor joyful.

Fourth, the dramatic changes in student demography coupled with the new demands of labor market preparation have required faculty and staff to revise drastically both basic curriculum and teaching strategies. Additions to curriculum include basic skills courses and English as a Second Language programs, and these courses and programs currently are being added to the curriculum at a faster pace than are new courses or programs.

The majority of career-vocational education faculty who participated in this statewide study have had 15 or more years of teaching service; a large majority of these are approaching retirement. As result of significant changes within the student population, two factors need to be addressed in this area: (1) the need for increase of staff development opportunities with business and industry for those who intend to remain in the teaching workforce, and (2) the need for the sensitive preparation of those intending to enter the teaching profession. Institutions engaged in teacher education and preparation will have to assume a serious commitment to

improve the quality of their programs and will need to focus on increasing ethnic diversity as they recruit potential teachers.

Fifth, coupled with concerns related to curriculum reforms and teacher preparation is the recognized need to improve intra- and inter-institutional communication systems and the dissemination of information. Successful communication systems are highly dependent on institutional planning and research which are driven by a workable Management Information Systems (MIS) program. Smaller and geographically isolated institutions should consider linkage with larger regional networks to help provide these important services.

Sixth, dramatic changes are occurring in the extent, nature, and number of services extended to students. Greater emphasis is being placed on the use of non-biased student assessment programs and services, on career counseling, on job placement services, on financial aid resources, and/or on student-related transitional programs. It has also been suggested that the traditional role of the counselor be reevaluated. These changes will have tremendous impact on the change in the role of counseling and other student services programs.

Finally, there is the question of accountability as it relates to responsible funding mechanisms and other needed resources. Can state and national policy affecting the funding of adequate educational programs for the preparation of a future work force actually and realistically deliver the resources needed for this educational training? What are the roles and responsibilities of business and industry in providing both incentive and resources for the appropriate training of an educated work force? Will all of these resources still fall short in supporting the expectations and outcomes outlined in the mission of California's community colleges and secondary school institutions? In other words, will the standards of accountability be greater than the funding provided by the system which drives this accountability?

In addition, both community colleges and secondary schools will need to improve their methods for evaluating the success of the career-vocational student in comparison to that of transfer students. Accountability elements in place help the institution to measure its success (or failure) to produce transfer students. Because of established mechanisms, it is relatively easy to track students' success in four year institutions; however, no similar or accurate tracking device is available to measure the success of career-vocational students. There is a tremendous need for institutions to produce evidence that their career students are successful and that their programs have good performance records in the local business-industry complex. It is safe to say, then, that accountability goes beyond prudent fiscal management.

Educational institutions are judged for their effectiveness in providing solid programs taught by qualified faculty and supported by adequate institutional support services. Institutions are evaluated on their ability to fashion their mission to meet the high standards set by the labor market. The quality of education's product—the well prepared student—has become eroded by the front-end conditions with which these institutions must cope.

Respondents to the surveys in this study describe the current overall caliber of their students to be poor. Not only are these students lacking in the fundamental core academic skills (basic skills), they are seen as being poorly motivated, lacking self esteem, and receiving minimal support from their families. The solution to this problem exceeds the resources of educational institutions. It is based in the very fiber of a society that has abandoned a value system that speaks to an individual's "right to work." American tradition has long supported the axiom that all individuals are entitled to equal opportunity in order to learn the basic tasks which will allow them to become productive members of society. Yet, society appears to be failing the educational institutions which it holds accountable. American society continues to ignore its responsibility for placing a high priority on those values which support the educational process. Can this fundamental dilemma be resolved within reasonable timeliness? Time will tell; meanwhile,time ticks along with the persistence and surety of a detonator.

Both community colleges and secondary schools need a blueprint for action in the development and delivery of career-vocational education which would improve the preparation of California's work force. The fundamental outcome for success of this blueprint lies in the construction of strong working relationships between community

colleges and secondary schools. It is both to the benefit of the student and to California's economic development that community colleges and secondary schools forge stronger partnerships based on mutual respect and common resources. In no way, can either educational segment do it alone.

II. CONTEXT OF THE REPORT

Since its formation in 1984, the Task Force on Articulation of the California Association of Community Colleges (CACC) Commission on Instruction has conducted three statewide studies dealing with articulation. The first of these studies was published in 1985,entitled **FOCUSING ON ARTICULATION: IMPROVING THE COMMUNITY COLLEGE TRANSFER RATE** (Community College Issues, Volume I, Number 2). That study was based on a 97% response to a statewide survey of all 106 California public community colleges and focused on the Task Force's first charge—to examine the articulation process between California's community colleges and public four-year institutions.

Partially as result of this effort, in 1986 and again in 1989, Senator Gary Hart introduced legislation that would improve the process of articulation between community colleges and four-year institutions. Senate Bill 1744 and Senate Bill 507 provide a clear process by which qualified California Community College students could effectively and efficiently transfer to California public four-year institutions.

Many of the recommendations suggested in the 1985 CACC paper are included in the 1987 Master Plan Renewal Document prepared by the legislature's Joint Committee for the Review of the Master Plan for Higher Education and are reflected in recommendations outlined in Assembly Bill 1725, the major reform legislation for community colleges.

In May, 1986, the CACC Articulation Task Force addressed Part 1 of its second charge by examining the articulation practices and programs between California's community colleges and public secondary schools. The report entitled **BUILDING NEW PARTNERSHIPS: CALIFORNIA'S SECONDARY SCHOOLS AND THE COMMUNITY COLLEGES** (Community College Issues, Volume 1, Number 3) was based on data received from a 98% response to a statewide survey of 106 California Community Colleges.

After the publication of the 1986 paper,there was increased interest in the work of the Articulation Task Force by the State Legislature. Senator Gary Hart, Chairman of the Senate Education Committee, offered suggestions and guidelines for the second phase of the proposed study. This study entitled **STRENGTHENING THE PARTNERSHIP: CALIFORNIA'S COMMUNITY COLLEGES AND THE SECONDARY SCHOOLS** (Community College Issues, Volume I, Number 4) was published in March, 1988. At this time, the membership of the Articulation Task Force was expanded to include representatives from California State Department of Education (SDE). With the endorsement and support of SDE Superintendent Bill Honig and SDE Deputy Superintendent James Smith, two SDE representatives, Carol Kennedy and Mark Fetler, joined the CACC Articulation Task Force team.

Data from a statewide survey of 1,129 secondary school district superintendents and secondary school principals formed the basis for this third study. Forty-five percent (45%) of the district superintendents and 55% of the secondary school principals responded to the survey which focused their perceptions of working relationship with community colleges and secondary schools.

Information received from the second and third articulation studies suggested that a fourth study should be conducted; questions and comments disclosed that a major common concern was the condition of career-vocational education and the preparation of a qualified California work force. It was a concern shared, also, by state educational and governmental leadership, by the Legislature, and by community college and secondary school faculty. administrators, and elected Boards of Trustees. Support for a fourth study related to career-vocational education was overwhelmingly positive.

III. BACKGROUND OF THE 1989 CALIFORNIA COMMUNITY COLLEGE AND SECONDARY SCHOOL INSTITUTIONS STUDY

In June, 1988, the Articulation Task Force of the California Association of Community Colleges' Commission on Instruction met to discuss appropriate strategies needed to conduct the fourth statewide articulation study. In addition to the CACC representatives (Douglas Burris, Peter Hirsch, and Barbara Mertes), five other individuals joined the Task Force: California Community Colleges Associate Vice Chancellor Bill Hamre; James Allison, State Director of Career-Vocational Education; Mark Fetler and Carol Kennedy, Educational Planning and Information Center, and Paul Gussman, Consultant, Intersegmental Relations, California State Department of Education.

The Task Force met regularly for six months for the purpose of identifying the parameters and focus of the study and for designing the two survey instruments to be administered to full-time career-vocational faculty and to institutional chief administrative officers. During this time, the Task Force received input from representatives of the Governor's Educational Research Unit and from the Senate Education Committee Staff.

By December, 1988, the Task Force determined the parameters and focus of the study and identified the key issues to be addressed.

The major question of the study would be: In order for California to become a dominant force in the world's economic market, what are the most feasible articulation processes that should be implemented between California secondary educational institutions and community colleges in order to produce a better prepared student for the California work force?

The major purposes of this study would be: (1) to identify those common concerns expressed by full-time career-vocational faculty in secondary educational institutions (High schools and Regional Occupational Programs and Centers (ROP/C's)) and full-time career-vocational community college faculty, which will improve their cooperative working relationship to produce better prepared students in the area of career-vocational education; and (2) to identify those leadership qualities of the institution's chief administrative officer which may foster a positive learning environment for the career-directed student and a more productive teaching environment for the career-vocational educator.

The expected outcomes of the study would include six areas: communication, fiscal accountability, demography, faculty accountability, leadership qualities, and the future economic condition of California.

Nine assumptions were formulated which would be the basis of the study:

1. There is a substantial drop-out rate among students enrolled in secondary educational institutions;
2. There are diminishing enrollments in career-vocational programs offered by secondary educational institutions and community colleges;
3. There is a paucity of equipment and materials in secondary educational institutions' career-vocational programs,and most particularly in the high schools;
4. There is a growing need for staff development and renewal among career vocational educators;
5. A need exists for careful review of career counseling and job placement services;
6. There is need for better utilization of common available resources between community colleges and secondary schools: facilities, equipment, and other technologically based teaching resources;

7. There is a need for a clearer understanding of appropriate teaching-learning strategies for the career-bound student;

8. There is need for a more useful student assessment process in order to produce more accurate accountability measurements;

9. A need exists for a better understanding of California's changing demography as it affects career preparation and the work force.

The Task Force focuses on the target population to be surveyed and on the contents of the survey instrument and by mid-January, 1989, this phase of the study design had been completed.

The target population would include the full-time career-vocational faculty and the Chief Executive Officer (CEO) from twenty-five (25) California Community Colleges. The colleges selected to participate collectively would comprise a representative sample of the California community college system. A conscious effort would be made to include colleges of differing sizes, economic resources, demographic profiles, and geographical location.

The Task Force chair contacted each selected community college CEO, asking for his/her college's willingness to participate in this study. All colleges contacted enthusiastically accepted the invitation. The college CEO was asked to provide the contact names of each high school principal and each regional occupational center director whose institutions operated within that college's service area. Collectively, 263 high school and ROP/C's were included in the study population base.

In the meantime, the faculty and CEO survey instruments were being refined. In addition to the guidance supplied by the individual Task Force members, representatives from the Governor's Research Unit, staff from the Senate Education Committee, and knowledgeable staff from both the community college field and from SDE offered suggestions and revisions to the survey instruments.

By mid-January, 1989, the two survey instruments were completed and ready for distribution. In February, 1989, the community college surveys were mailed to each college; SDE staff mailed the high school and ROP/C's surveys. Analysis of the data was provided through the Management Information Services (MIS) Unit in the California Community Colleges' Chancellor's Office under the direction of Associate Vice Chancellor Bill Hamre. Mr. Hamre worked closely with SDE Task Force members Carol Kennedy and Mark Fetler in both the collection and analysis of data.

Of the 25 community colleges selected to participate in the study, 24 (96%) of the colleges responded. Of the 263 high school and ROP/C's identified for the study, 230 high schools (98.7%) and 27 ROP/C's (90%) participated in the study.

The total number of full-time community college career-vocational faculty participating in the study was 762, while 1,073 high school faculty and 164 ROP/C faculty responded to the survey.

Eighteen (18) community college CEO's (78%) completed the leadership survey instrument; 136 high school principals (58%) and 23 ROP/C directors (90%) responded to the leadership survey.

By early October 1989, the Chancellor's MIS Unit had completed the data analysis and submitted this information to the Task Force for its review and discussion.

IV. THE SURVEY INSTRUMENT AND PROCESS

Faculty Survey

Each full-time community college, each full-time high school, and each full-time ROP/C career-vocational faculty member was asked to respond to the following:

- length of service as an educator
- primary teaching area
- staff development experience, if any, and what kind
- evidence of change in programs since 1984
- if appropriate, identification of reasons for change in student enrollments
- evidence of change in educational preparation of students since 1984
- general educational preparation of students currently enrolled in career-vocational education classes
- identification of barriers which prevent career-vocational faculty in providing effective instruction
- identification of institutional initiative in removing these barriers
- identification of services which community colleges and/or high schools and ROP/C's could provide in order to improve their working relationships

Leadership Survey

Each community college CEO, each high school principal, and each ROP/C director was asked to respond to the following:

- evidence of institutional change in career-vocational education programs since 1984
- if appropriate, identification of reasons for change in student enrollments since 1984
- reassignment of career-vocational faculty to teach in areas not in their primary area of expertise
- if appropriate, identification of staff development activities provided the reassigned faculty
- general educational preparation of students currently enrolled in career-vocational education classes
- identification of barriers which prevent effective instruction in career-vocational education
- identification of how the institution compensates for these barriers
- as leaders of their respective educational institution, identification of the most significant issues related to administering career-vocational programs
- identification of services which community colleges and/or high school and ROP/C's could provide in order to improve their working relationships
- identification of successful strategies used by institutional leaders to support career-vocational education in their institutions

The survey designed for faculty contained 13 major items; the one for the institutional leader contained 12 major items. However, both survey instruments contained 6 identical items to which both faculty and institutional leaders responded. In those areas where all populations responded, comparisons have been made among all groups. Similarities and differences in responses are noted on accompanying charts under the appropriate items to which each group or both groups responded.

V. RESULTS OF THE SURVEY

Profile of Faculty Responding

Length of services as a full-time career vocational educator:

The majority of faculty from both segments responding to this item identified their longevity of teaching service to be 15 or more years. This identification of length of teaching service is generally comparable to the years of teaching service of all other full-time faculty employed in both segments.

TABLE I: Length of Service as Full-Time Career-Vocational Educator

Years of Service	Community College Faculty	Secondary School Faculty
15 years +	58%	59%
11-15 years	19%	16%
6-10 years	14%	13%
1-5 years	9%	12%

Primary Area of Teaching

Faculty respondents were asked to identify their primary areas of teaching assignments. Attached to each survey was a list of career-vocational teaching areas as defined by the California State Department of Education's California Basic Educational Data Systems (CBEDS). These major category areas are Agriculture, Business Education-Marketing, Business Education-Office, Consumer and Homemaking Education, Health Careers, Home Economics Related Occupations, Industrial and Technology Education, and Work Experience (Appendix A).

Each faculty respondent chose that teaching assignment description which most closely matched the respondent's assignment.

Community college faculty respondents tended to group in three areas: (1) Industrial and Technical Education, (2) Business Education-Office, and (3) Health Careers; secondary school faculty respondents' first three choices were: (1) BusinessEducation-Office, (2) Industrial and Technical Education, and (3) Agriculture.

Implications for faculty cooperation among disciplines are of particular concern to those disciplines where there is a disproportionate correlation between teaching areas in the two segments, such as Health Careers and Agriculture. Special efforts will need to be made in forming articulation councils in those teaching areas where the percentage of faculty is considerably larger in one segment as opposed to the other.

Work Experience programs appear to be on the decline in both segments. The Industrial and Technical Education Category includes the second highest number of respondents, and therefore, the highest percentage of faculty involvement.

TABLE II: Primary Teaching of Career-Vocational Educators

Primary Teaching Area	Community College Faculty	Secondary School Faculty
Agriculture	6%	14%
Business Education-Marketing	7%	6%
*Business Education-Office	27%	39%
Consumer and Homemaking	8%	9%
Health Careers	25%	2%
**Home Economics Related Courses	4%	6%
Industry and Technical Education	30%	23%
Work Experience	2%	1%

* includes Computer Education Courses
** included Child Development Courses

Current Teaching Assignment in Area of Expertise and Related Staff Development Opportunities:

Faculty were asked if they are currently teaching in their primary area of expertise. This question was included for two reasons: (1) to determine the number of faculty who were actually reassigned to another teaching field during the period of institutional reform, and (2) to identify the extent of staff development available to reassigned faculty during this period of transition. It is important to know if a faculty had the opportunity to prepare satisfactorily for their reassignment.

TABLE III: Faculty Currently Teaching in Their Area of Expertise

	Community College Faculty	Secondary School Faculty
Teaching in Primary Area	98%	95%
Not Teaching in Primary	2%	5%

TABLE IV: Faculty Not Teaching in Their Area of Expertise Who Received Staff Development

	Community College Faculty	Secondary School Faculty
Received Staff Development	33%	44%
Did Not Receive Staff Development	67%	56%

TABLE V: Components of Staff Development Which Helped Reassigned Faculty Prepare for Their New Teaching Assignment

Component	Community College Faculty	Secondary School Faculty
Enrolled in formal course work	8%	10%
Training in summer employment	5%	5%
Reassigned from job for special study	2%	2%
Participated in conferences, workshops	12%	17%
Formal programs in staff development	6%	9%
Other	3%	3%

There may be a conflict in perception between the faculty's description of a teaching reassignment from those of the institutional chief administrators. Responses indicate that 56% of the community college CEo's stated that career-vocational faculty had been reassigned, and 53% of secondary school CEO's reported that faculty had been reassigned in their institutions since 1984.

The three most popular staff development activities available to reassigned faculty are: (1) participation in conferences, seminars, and workshops; (2) participation in professional organizations and/or associations; and (3) enrollment in additional formal course work while on the job.

A small number of community colleges and secondary school institutions reported that resources were not available to provide any kind of staff development activities for reassigned faculty.

In summary, the faculty profile of those community college full-time career-vocational educators who responded to the survey are:

- the majority of respondents have 15 or more years of teaching services;
- respondents tend to teach in three major career-vocational areas;
- respondents were not reassigned to a secondary area of teaching expertise;
- if they were reassigned, chose as their first choice staff development activities which included participation in conferences, seminars, and workshops.

The secondary school faculty responding to the survey mirror those characteristics of their community college colleagues in teaching longevity, in two of the three major teaching career-vocational areas, in reassignment from a primary teaching expertise, and in staff development activities.

Institutional Changes Since 1984

All survey participants were asked to give their perceptions relating to change within their institutions since 1984. This change was focused in three teaching areas in career-vocational education: program change, student enrollment number change, and changes related to the range and depth of career-vocational coursed offered students.

The benchmark year of 1984 was chosen for three reasons. First, it provides continuity with the previous two community college-secondary school articulation studies which used 1984 as a benchmark year. Secondly, 1984 marks the beginning of the current educational reform movement in secondary schools. Finally, the 1984 date provides the opportunity of a five-year span to scrutinize the longitudinal effects of change on career-vocational programs and students.

Regarding these changes in career-vocational programs, community college faculty generally agree with the perceptions of their CEO's regarding institutional changes since 1984. Secondary school faculty generally agree with their principals and ROP/C directors. However, community college and secondary school personnel perceive change differently.

While community college administrators and faculty generally describe an increase in programs, student enrollment numbers, and the range and depth of career-vocational education courses offered, secondary school counterparts see a sizable decrease in all three areas.

TABLE VI: Number of Career-Vocational Programs Offered Since 1984

Condition	Community College CEO	Community College Faculty	Secondary School CEO	Secondary School Faculty
Increased	44%	43%	32%	21%
Decreased	29%	15%	47%	53%
Remained the Same	27%	42%	21%	25%

TABLE VII: Number of Students Enrolled in Career-Vocational Education Since 1984

Condition	Community College CEO	Community College Faculty	Secondary School CEO	Secondary School Faculty
Increased	44%	44%	32%	27%
Decreased	44%	34%	55%	59%
Remained the Same	12%	22%	13%	14%

TABLE VIII: Range and Depth of Course Offerings Within the Career-Vocational Programs Since 1984

Condition	Community College CEO	Community College Faculty	Secondary School CEO	Secondary School Faculty
Increased	67%	62%	33%	28%
Decreased	11%	10%	46%	45%
Remained the Same	22%	28%	21%	27%

Only in one area do community college CEO's differ substantially from those perceptions held by community college faculty; that area deals with the number of student enrollments in career-vocational education. CEO responses are evenly split on whether or not there has been an increase or decrease in student enrollments.

On the other hand, secondary school respondents see an overall decrease in the number of programs, student enrollments, and in the depth and range of course offerings in career-vocational education

Cause for Change in Student Enrollment Numbers

All respondents were asked to list in priority order their perceptions of why change occurred in the area of student enrollment numbers. Eight items were suggested for consideration, and respondents were encouraged to add any other cause which they felt was appropriate. As in the case of the previous item, a difference in perception regarding the cause for change in student enrollment numbers exists between community college and secondary school respondents. This difference may be explained because it is derived from two very different points of view. Community college respondents perceived an overall increase in their career-vocational programs and enrollment numbers while secondary school respondents perceived an overall decrease. The motivation upon which these perceptions is based is different for each segment responding to the survey. These are listed in priority order.

TABLE IX: Reasons Why Student Enrollments Changed in Career-Vocational Areas

Reason	Community College CEO	Community College Faculty	Secondary School CEO	Secondary School Faculty
Change in graduation requirements in secondary schools	3	8	1	1
Change in four-year college requirements	9	9	3	3
Change in labor market demands	1	1	8	9
Change in institutional funding priorities	8	7	7	5
Availability of resources to support costs of staff, etc.	7	4	3	4
Student preferred choice	2	2	2	7
Quality of program marketing	4	3	7	8
Flexibility in course program scheduling	6	5	5	2
Other	4	6	6	6

Community college respondents agree that the major causes for an increase in career-vocational programs, student enrollments, and program depth are related to labor market demands, student preferred choice, and quality of program marketing. They perceive that change in four-year college requirements and institutional funding priorities have not played a major role in student enrollment changes.

Secondary school respondents agree that change in high school graduation requirements, change in four-year college requirements,and change in institutional funding priorities have had a direct effect on the decrease in student enrollments in career-vocational education; they agree further that changes in labor market demands and the quality of career-vocational program marketing have had little effect on student enrollments. However, secondary school CEO's differ substantially in their perceptions from those of secondary school faculty in relation to student preferred choice of programs and the flexibility of course program scheduling. Faculty respondents believe that the lack of flexibility in course program scheduling may deter student enrollments in career-vocational programs while secondary school CEO's indicate that student preferred choice has a greater influence in directing students away from career-vocational programs.

Change in the Educational Preparation of Students Enrolled in Career-Vocational Programs

Faculty from both segments were asked if they perceived any difference in the educational preparation of their students since 1984. Were these students better prepared, less prepared, or about the same in preparation as thosestudents who entered the program before 1984? Only 10% of those faculty responding from both segments indicate that their students are better prepared. Nearly half of all faculty responding believe that their students are less prepared, while the rest of the faculty respondents state that the educational preparation of their students has not changed. Faculty perceive that the failure to prepare students adequately for career-vocational education programs is a problem whose magnitude is immeasurable and whose long-lasting effect on California's job market is devastating. If this trend continues, California's locally based work force will never be able to support its growing economy.

TABLE X: Change in Educational Preparation of Students in Career-Vocational Education Since 1984

Condition	Community College Faculty	Secondary School Faculty	All Faculty
Better prepared	9%	11%	10%
Less prepared	48%	46%	47%
About the same	43%	43%	43%

Specific Elements Related to the Educational Readiness of Career-Vocational Students

All respondents were asked to assess the educational readiness of students who are currently enrolled in career-vocational education courses within their institutions. This assessment focused on seven components: reading/writing skills; mathematics/computational skills; problem solving and analytical skills; study skills (listening, notetaking, library skills); motivation; self-esteem; and family involvement in student education. The respondents were asked to describe the degree of each component based on a scale of 1 (well prepared/high/strong support) to 5 (poorly prepared/ inadequate/low). The majority of all respondents agreed that few students' assessments lie at either extreme; however, most of the respondents indicated that their appraisal of students' abilities tend to cluster at the lower end of the measurements scale, particularly in the 3 and 4 categories.

This assessment is discouraging, particularly for secondary schools where intensive efforts toward the improvement of student academic (basic) skills has been occurring since 1984 when Senate Bill 813 was signed into law.

Because both faculty and CEO's responded to this item, both responses are included. There is general agreement between both segments and among all respondents that the students enrolled in career-vocational courses are not educationally well prepared to meet the challenges of the curriculum or the labor market.

TABLE XI: Reading/Writing Skills of Career-Vocational Students

Respondents	Rating				
	Well Prepared				Poorly Prepared
	1	2	3	4	5
Community College CEO's			50%	44%	6%
Community College Faculty	2%	5%	44%	38%	11%
Secondary School CEO's	1%	14%	62%	19%	4%
Secondary School Faculty	1%	8%	49%	31%	11%

TABLE XII: Mathematics/Computational Skills of Career-Vocational Students

Respondents	Rating				
	Well Prepared				Poorly Prepared
	1	2	3	4	5
Community College CEO's		6%	44%	44%	6%
Community College Faculty	1%	7%	44%	38%	10%
Secondary School CEO's		12%	63%	22%	3%
Secondary School Faculty	1%	8%	44%	35%	12%

TABLE XIII: Problem-Solving/Analytical Skills of Career-Vocational Students

Respondents	Rating				
	Well Prepared				Inadequate
	1	2	3	4	5
Community College CEO's			44%	56%	
Community College Faculty	2%	11%	43%	35%	9%
Secondary School CEO's		9%	51%	38%	2%
Secondary School Faculty	1%	8%	38%	38%	15%

TABLE XIV: Study Skills (Listening, Notetaking, Organization, Library Skills) of Career-vocations Students

Respondents	Rating				
	Well Prepared				Inadequate
	1	2	3	4	5
Community College CEO's			33%	61%	6%
Community College Faculty	1%	13%	37%	38%	11%
Secondary School CEO's	1%	7%	50%	37%	5%
Secondary School Faculty	1%	6%	30%	45%	18%

Table XV: Motivation of Career-Vocational Students

Respondents	Rating				
	High				Low
	1	2	3	4	5
Community College CEO 's	22%	50%	28%		
Community College Faculty	17%	32%	36%	11%	4%
Secondary School CEO's	4%	32%	51%	9%	4%
Secondary School Faculty	4%	19%	42%	25%	10%

Table XVI: Self-Esteem of Career-Vocational Students

Respondents	Rating				
	High				Low
	1	2	3	4	5
Community College CEO's		33%	61%	6%	
Community College Faculty	6%	29%	49%	13%	3%
Secondary School CEO's	1%	21%	59%	16%	3%
Secondary School Faculty	2%	19%	49%	24%	6%

Table XVII: Family Involvement in Student Education with Career-Vocational Students

Respondents	Rating				
	High				Low
	1	2	3	4	5
Community College CEO's	7%	7%	40%	20%	26%
Community College Faculty	4%	13%	46%	25%	12%
Secondary School CEO's	2%	8%	38%	41%	11%
Secondary School Faculty	1%	8%	27%	34%	30%

Generally, assessing the students currently enrolled in career-vocational education programs within their institutions, respondents tend to group their responses toward the middle and lower ends of the rating spectrum. The one exception occurs in assessing the motivation of their students: 72% of the community college CEO's and 49% of the college faculty believe that their career-vocational students are well motivated. However, the overall picture of student educational preparation is a discouraging one and suggests that new strategy for the teaching of academic (basic) skills and sensitivity to affective and external support areas are badly needed in both segments.

One item in the assessment speaks to family support of career-vocational students, and findings are particularly significant for the secondary school student. Fifty-two percent (52%) of secondary school CEO's and 64% of secondary school faculty perceive that family support and involvement for career-vocational students is minimal. Family interest in the student's education appears to have correlation to student achievement, motivation, and self-esteem within the secondary school career-vocational student population.

Barriers to Providing Effective Instruction in Career-Vocational Education

All respondents were asked to rate those items which represent barriers to providing effective instruction in career-vocational education. The rating scale includes four levels of intensity: strong barrier, moderate barrier, limited barrier, and not a barrier. Eight separate items were offered for consideration: (1) students with limited English fluency; (2) cultural differences among students; (3) economic differences among students; (4) lack of administrative support for programs; (5) lack of interdisciplinary cooperation among faculty on the campus; (6) lack of cooperation between faculty at high school and community college; (7) lack of cooperation with and/or support from business/industry; and (8) lack of student choice in course availability.

Students with Limited English Fluency

Respondents from the community college believe that students with limited English fluency present a major concern. Sixty-nine percent (69%) of the CEO's and 73% of the faculty identified this item as being a strong to moderate barrier to their providing effective instruction in career-vocational courses, while only 34% of secondary school CEO's and 46% of the secondary school faculty perceive this element as a barrier. Clearly, this finding indicates a difference in student populations.

Cultural and Economic Differences Among Students

Over 50% of the secondary school CEO's do not perceive that cultural and economic differences among students present barriers to providing effective instruction in career-vocational education; however, secondary school faculty, community college CEO's, and community college faculty believe that these differences present limited barriers. Community college CEO's are particularly concerned with the economic differences among students since 94% of these respondents believe that students with poor economic backgrounds tend to have difficulty in pursuing their education.

Lack of Administrative Support for Programs

CEO's from both segments suggest that the lack of administrative support for career-vocational education programs does not present a barrier to providing effective instruction in career-vocational programs. Fifty percent (50%) of secondary school faculty and 41% of community college faculty disagree with this perception. The faculty respondents suggested that the lack of administrative support presents strong to moderate barriers to the delivery of effective instruction to career-vocational students.

Lack of Interdisciplinary Cooperation Among Campus Faculty

The majority of all respondents agree that the lack of interdisciplinary cooperation among campus faculty does not create a major barrier to their providing effective instruction in career-vocational programs. Faculty tend to perceive this issue as being more serious than do CEO's; however, neither group places a high priority on this item.

Lack of Cooperation Between High School and Community College Faculty and Lack of Support From Business and Industry

Over 50% of secondary school CEO's,secondary school faculty, and community college faculty perceive that the lack of cooperation between high school and community college faculty does not present a strong barrier to their providing effective instruction in career-vocational programs; however, 63% of community college CEO's disagree with this statement. Many of the respondents may have interpreted this question to mean that there is already sufficient cooperation between high school faculty and community college faculty, and therefore, there is no barrier to providing effective instruction in career-vocational education.

Over 50% of all respondents suggest that the lack of support from business and industry does not present a strong barrier. One may draw the conclusion that respondents feel that: (1) there is strong support from business and industry or (2) this support is not important to their providing effective instruction in career-vocational education.

Lack of Student Choice in Course Availability

Nearly 60% of secondary school CEO's, secondary school faculty, and community college CEO's perceive that a lack of student choice in course availability present moderate to limited barriers in allowing effective instruction in career-vocational courses. In contrast, over 50% of community colleges perceive that the lack of student choice is not a barrier.

Faculty Perceptions of What Needs to Be Done to Remove Barriers to Effective Teaching and Preparation of Career-Vocational Students

Faculty respondents from both community colleges and secondary schools were asked to evaluate the degree of need related to 14 listed items. Each item was to be evaluated as to its being strongly needed, moderately needed, of limited need, or not needed for removing barriers to insure effective teaching and preparation of career-vocational students.

Those items ranked as strongly needed/moderately needed by both community college and secondary school faculty are listed in order of highest percentages of all faculty indicating these responses:

Table XVIII: Faculty-Ranked Institutional Areas Which Need Improvement

Item	Percentage
Career counseling	87%
Dissemination of program information to students and family	82%
Provision of appropriate facilities	77%
Shared resources with business/industry	74%
Special programs for at-risk students	71%
Student assessment testing	70%
Teacher/staff development programs	70%
Flexible program scheduling	70%
Community advisory committee partnerships	66%
Formal articulation agreements between high school and community colleges	64%

Those items ranked as of limited need/not needed by both community college and secondary school faculty are listed in order of highest percentages of respondents' ranking:

Item	Percentage
More use of adjunct faculty	63%
Interdisciplinary team teaching	60%

Community college and secondary school faculty differ in their perception of the importance of these two items:

Item	Community College Faculty	Secondary School Faculty
English as a Second Language Courses	76%	49%
Student Financial Aid	76%	38%

Educational Leaders' Perception of How Their Institutions Have Compensated for Barriers Which Deter Effective Teaching and Preparation of Career-Vocational Students

Community college CEO's and secondary school CEO's indicate that their respective institutions have compensated for the various barriers by initiating appropriate action and offering special programs and services. The data represent the percentage of institutions offer these programs:

Table XIX: Programs Initiated by Community Colleges and Secondary Schools

Item	Community Colleges	Secondary Schools
Provide English as a Second Language courses	100%	40%
Distribute program materials to students/family	67%	37%
Provide student assessment programs	100%	37%
Provide special programs for at-risk students	83%	44%
Provide student financial aid	100%	11%
Provide career counseling	94%	53%
Provide teacher-staff development programs	78%	46%
Provide appropriate facilities	89%	47%
Provide flexible scheduling programs	56%	27%
Encourage interdisciplinary team teaching opportunities	39%	11%
Have established formal articulation agreements between high schools and community colleges	83%	36%
Encourage use of community advisory committee partnerships	89%	40%
Coordinate the use of shared resources with business/industry	78%	22%
Encourage use of adjunct faculty	83%	10%
Other	6%	4%

While several of the items are reflective of the mission, compliances, and practices of community colleges, (e.g., financial aid, student assessment, and staff development), student services and other programs can be provided by secondary schools. These include programs for at-risk students, career counseling, articulation agreements, community advisory committees, and the coordination of shared resources with business/industry. Based upon CEO's perceptions, the presence of these services and programs within secondary schools is lacking, especially when compared to secondary school faculty perceptions of their importance.

CEO Appraisal of Most Significant Issues Related to Administering Career-Vocational Programs

Community college and secondary school CEO's were asked to rank in priority order of importance those issues which they considered to be the most significant similarities in responses among the institutional leaders from both community colleges and secondary schools. One (1) indicates most significant, and 9 indicates least significant.

Table XX: Significant Issues Related to Administering Career-Vocational Programs

Item	Community Colleges	Secondary Schools
Inadequate state funding	1	1
Overall student drop-out rate	2	2
Lack of adequate teaching supplies and equipment	3	5
Availability of facilities	4	3
Availability of qualified faculty	6	4
Lack of cooperation with District administration	7	9
Lack of cooperation with neighboring institutions	8	8
Lack of cooperation with business/industry	9	7
Other	5	6

Both segments express concern that inadequate state funding and the over-all student drop-out rate present two of the most significant issues related to the effective administration of career-vocational programs in their institutions. The highest priorities are followed by the lack of adequate teaching supplies and equipment to support programs, the availability of facilities, and the availability of qualified faculty.

Those items which present the least concern to CEO's are a lack of cooperation with business/industry, lack of cooperation with District administration, and lack of cooperation with neighboring institutions. It may be assumed that the condition of these areas is satisfactory or that the issue is not important.

Summary of Respondents' Suggestions: Appraisal of How Community Colleges and Secondary School Can Improve Their Working Relationship

All respondents were asked to contribute one method of improving the working relationship between secondary schools and community colleges. Those items volunteered most frequently by all respondents were tallied and ranked in priority order. While there is general agreement on six items, community college and secondary school respondents disagree slightly on the order of these items. One (1) indicates highest priority (most frequently mentioned) and 6 indicates lowest priority (least frequently mentioned).

Table XXI: Improve Working Relationships Between Community Colleges and Secondary Schools

Item	Community Colleges	Secondary Schools
Establish and improve articulation and institutional communication at the administrative level	1	1
Formally develop joint curriculum	4	2
Implement faculty-to-faculty communication	3	3
Improve marketing/student awareness of career-vocational programs	2	4
Improve academic/career counseling	6	5
Provide incentives for students to enroll in career-vocational courses	5	6

Community college CEO's were asked to write in three strategies which they felt were successful in supporting and promoting career-vocational education programs within their institutions.

Eighteen (18) CEO's of the participating 24 colleges responded to this question. The majority of the respondents indicate that the most successful strategy is the degree of advocacy for career-vocational education which the CEO demonstrates. This is the most important of leadership responsibilities. If the CEO expresses strong support for career-vocational programs within the institution, the institution reflects this strength in the quality of its programs. This advocacy is the foundation for all other strategies which a community college CEO may use in supporting career-vocational education.

Nine (9) other strategies are mentioned, and these are listed in priority order based upon the frequency with which they were mentioned:

First Priority:

- Formal articulation agreements between community colleges and secondary schools
- Use of community program advisory committees
- Use of 2+2(+2) programs

Second Priority:

- Partnerships with business and industry
- Special project funding to underwrite the purchase of expensive equipment
- Community college faculty meetings with secondary school faculty in the same disciplines

Third Priority:

- Staff development programs for upgrading/retraining faculty
- Targeted marketing for special programs
- Administrative reorganization to handle new relationships with secondary schools and local business/industry

Secondary School CEO's Strategies to Support Career-Vocational Education

One hundred and seventeen (117) secondary school CEO's identified successful strategies which they felt enhanced career-vocational education programs within their institution. These strategies are listed in priority order based on the frequency of times they were mentioned. All strategies listed were mentioned at least once by 25 respondents:

- Use proactive and vigorous marketing techniques and creative student recruitment approaches, especially with under represented groups

- Express positive leadership by actively participating in student-related programs and activities; visit classrooms and laboratories frequently

- Promote and support articulation programs with community colleges

- Provide students with program options through non-traditional flexible scheduling

- Provide strong support for student assessment and career counseling services; insist that career counselors participate in staff development activities.
- Promote strong interdisciplinary links within the institution, especially with academic skills (basic skills) instruction.
- Involve local business and industry representatives in the school's programs beyond that of traditional advisory committee involvement.
- Provide incentives within the institution that will encourage students to enroll in career-vocational courses, e.g., develop courses which meet graduation requirements.
- Support and participate in parent-outreach programs and activities, especially for underrepresented groups.
- Encourage locally elected board members to become knowledgeable and supportive of career-vocational programs.
- Improve the status of career-vocational faculty within the institution and encourage their leadership roles.
- Recruit the best faculty available to teach career-vocational education programs.
- Engage in grant writing projects to assure funding for expensive equipment.
- Encourage the use of communications systems provided through MIS.

In summary, secondary school CEO's state that their personal involvement with career-vocational education is the single best strategy they use to support these programs in their institution.

VI. IMPLICATIONS AND POLICY RECOMMENDATIONS FROM 1989 CAREER-VOCATIONAL SURVEY

Faculty Profile

Finding: Close to sixty percent (60%) of all faculty respondents from both community colleges and secondary schools state that they have acquired 15 or more years of teaching service.

Policy Implication: A large number of career-vocational faculty, as with many of the faculty serving community colleges and secondary schools, are approaching retirement. With the continued population growth occurring in California, many faculty replacements will be needed to serve this growing population. However, faculty replacement should reflect the change in population demography occurring in California. In addition, those faculty whose teaching service is less than 15 years will need staff development activity in order to remain current with the changing technology.

All community colleges and secondary schools should create a thoughtful and realistic plan for faculty replacement. Every effort should be made to recruit faculty whose skills and abilities match those required of the "new teaching environment." For example, all faculty should be computer literate, be conversant with new technological advances and appropriate teaching strategies, and have good communication skills. Above all,

colleges and secondary schools should actively seek staff diversity so that the faculty reflect the diverse student population they serve.

Staff development activities should be institutionalized so that these activities correspond closely to the goals and priorities of institutional needs. Professional development and staff renewal are vital activities related to the stability of the institution's mission; these activities, therefore, should be closely linked to the institution's fundamental needs and to its future direction.

Teaching Disciplines

Finding: The majority of community college career-vocational faculty teach in three areas: industrial/technical education, business education (office), and health careers. The majority of secondary school career-vocational faculty teach in industrial/technical education, business education (office), and agriculture. These four areas represent the major economic and human services work force upon which California's future depends.

Policy Implication: It is vitally important that the curriculum and teaching strategies used in the delivery of these educational programs are current and that the learning resources, equipment, and facilities enhance the teaching environment. Close ties with business and industry must be forged so that faculty can apprise students of labor market needs and trends which would allow them to take advantage of employment opportunities.

Career-vocational faculty from both segments should establish close working relationships among the disciplines in order to provide a curriculum continuum for students. This curriculum continuum will not only provide students a sense of direction in career planning but will encourage high school students' retention and transfer opportunities to community colleges.

One outcome will be that the Associate's Degree in community colleges will regain importance because this degree will represent the appropriate "passage" into the job market. Secondary school students should be apprised that there is actually a career ladder for employment opportunities and a sequential order to their course of study which will enable them to exercise their "right to work."

On the other hand, the Certificate offered by community colleges continues to gain prominence among those reentering college for the purpose of upgrading their skills and for the acquisition of new information. Vital courses grouped in manageable information units allow the life-long learner to advance career opportunities in short periods of time.

Institutional Change in Career-Vocational Offerings

Finding: Community college CEO's and faculty state that there has been an overall increase in the number of career-vocational programs, in the number of student enrollments, and in the range and depth of their program offerings. On the other hand, secondary school CEO's and faculty state that there has been an overall decrease in all three areas.

Policy Implication: Community college respondents believe that their overall increase in career-vocational education is related to four factors: labor market needs, student preferred choice of programs, effective marketing techniques, and the availability of resources.

Their secondary school counterparts attribute their decrease in career-vocational education to be directly related to the change in high school graduation requirements, to inadequate scheduling of career-vocational courses, to the change in the admission standards of four-year institutions and to a lack of institutional support.

It is obvious that the most critical concern with career-vocational education lies in secondary schools. Both the secondary school CEO's and the secondary school faculty perceive that the recent educational reform movements have tended to isolate both the career-vocational faculty and their programs from general student

consumer use. Every attempt should be made to eradicate the false division between "academic" programs and career-vocational programs; this division encourages a negative perception of one program at the expense of the other. In many secondary schools, career-vocational education is perceived to be of lesser value than are the more traditional academic programs. This attitude can permeate an institution, and students fall victim to an unfair judgment regarding their educational status.

All students are preparing for a career. The preparation for this career may require completion of a high school diploma or an A.A. Degree, or a M.D. To label students' goals as having lesser or more important value within an educational institution is doing disservice to both the student and the program. And, the preparation for a career today in modern electronics or automotive technology can be as rigorous and as demanding as preparation for a career in law or medicine.

One question, however, goes beyond the observation to address a fundamental issue: which institution should be the prime deliverer of career-vocational education? Are secondary schools perceived by the general population, by business and industry, and by students themselves as an institution under-qualified to deliver a well prepared work force? If so, then there needs to be a serious commitment to establishing the primacy of community colleges and their role in developing a closer working relationship with secondary schools and ROP/C's to serve best the needs of California's economy for a well educated work force.

Career-Vocational Education Student Preparation

Finding: All respondents were asked to appraise the educational preparation of their students since 1984. Forty-eight percent (48%) of all respondents state that students are **less well prepared** to meet the challenges of the career-vocational curriculum than they were five years ago. In fact, only 10% of the over 2,400 respondents state that their students are well prepared.

Respondents rank their students as being below average in all academic (basic) skills such as reading/writing, mathematics/computational skills, analytical skills, and study skills. In general, the respondents perceive that their students lack motivation, self esteem, and receive minimal family support. The only exception to this generalization is community college faculty's perception of their students' motivation; faculty in community college career-vocational programs tend to rank their students' motivation slightly higher than did the rest of the study population.

Policy Implication: The preparation of career-vocational students to meet the rigorous standards required by the new technology is disappointing, especially in view of the new reforms established in secondary schools in 1984. This problem, however, is more than an educational one; it speaks directly to the value which society places on the fundamental skills needed to produce a knowledgeable work force that can manage complex information.

All career-vocational programs including those designed for special adult populations must continue to integrate academic (basic) skills components throughout the entire curriculum. Programs such as 2+2(+2) should be more than coordination among teaching disciplines but should include student assessment components, academic (basic) skills instruction, and career counseling.

In addition, early detection of students' lack of academic (basic) skills is imperative if schools are to reverse the high student drop-out rate. This detection must occur before students reach middle schools; rigorous corrective instruction needs to be emphasized in students' early development, and emphasis must be placed on students' right to succeed, not fail. This is an endemic problem that must be addressed before it destroys generation after generation of California's potential work force.

Barriers to Providing Effective Instructions

Finding: Community college faculty suggest that four major barriers prevent them from providing effective instruction in career-vocational programs: English as a Second Language (ESL) programs do not exist in sufficient numbers to handle growing student demand; information concerning financial aid programs and/or other student service-related programs appears not to be readily available to needy students; lack of administrative support for career-vocational programs is perceived to be a major concern; and, options provided through flexible scheduling are not available to students who need to work while attending college.

Secondary school faculty agree with community college faculty in two areas: the lack of administrative support and the lack of course scheduling options.

Policy Implication: Colleges and secondary schools perceive that their institutions have not adjusted to prevailing student needs and that administrative leadership is not sensitive to the support that faculty need in order to work effectively with students.

All faculty respondents share the same perception: change is occurring within the institution, and the institution appears to be responding inadequately to change.

In its Basic Agenda for 1989-90, the California Community Colleges Board of Governors outlines its concern for students needing ESL, basic skills, and financial aid. The policies related to the administration of these programs are described in the Basic Agenda and are available to all colleges.

The designing of appropriate course schedules is clearly the responsibility of the college's instructional and student services units. Students enrolled in career-vocational education often differ in their time schedule needs from other students. What may be described as unorthodox course scheduling patterns are often those that best fit the schedule of career-vocational students: late afternoon, evening, and weekend offerings. Regulatory restrictions need to be reviewed in order to allow faculty to provide the needed scheduling flexibilities within the institution. Encouragement, direction, and fiscal support must be given to provide for short open-entry/open-exit courses in order to accommodate student need.

Administrative support is determined often on the degree in which faculty perceive "treatment" of themselves and their programs. Placing the importance of career-vocational education on an equal par with that of other educational programs will eliminate perceived competition between the "two sides" of the institution and ensure that there is equity within the institution.

Improving the Effectiveness of the Institution

Finding: All faculty respondents believe that the following areas need review and improvement, descending in priority order: career counseling, dissemination of program information to students and their families, provision of adequate facilities, improved relationships with business and industry complex, and appropriate programs for at-risk students.

Community college and secondary school CEO's agree with faculty respondents in all five areas, and they add two additional concerns: the need to establish strong articulation agreements with one another's institutions, and the desire to utilize more effectively community advisory committees.

Policy Implication: Greater emphasis needs to be placed on the role of student services within the institution, and resources must be provided in order for student services to accomplish the many tasks that continue to be assigned to this unit. Creative leadership must be in place to handle growing demands, and an enlightened staff will need to assess the priorities of students as these relate to those of the institution. Strong staff development programs need to be created for all counselors, and most especially for those engaged in career counseling.

Student needs, marketing techniques, articulation with other schools and with business/industry, special programs in career counseling, and the identification and guidance of at-risk students are among the top priorities to be delivered by student services. All career-vocational respondents believe that the success of their programs are related to the effectiveness of their student services programs.

Closer cooperation among educational institutions is needed to provide services to students who need career counseling. The severe cutbacks in funds in secondary schools has caused the reduction or elimination of effective career counseling services. Community colleges have established career centers, acquired materials that are useful to students in making career choices, and have well-trained career counseling staff. Whenever possible, these resources should be shared with secondary school students; the marketing potential for community colleges is significant.

Both colleges and secondary schools need to review carefully all program marketing material disseminated to students for its readability, image, and for its overall effectiveness of use for both students and their families.

Community advisory committees provide important links to local business and industry, but often the services of these individuals are not realized to their ultimate potential. With appropriate programs, the same community advisory committee can work effectively with both secondary school and community college career programs, thus providing continuity of leadership and a common bank of resources.

Both secondary schools and community colleges need to review their respective organizational structures and revamp their leadership responsibilities, thus creating liaison positions which facilitate both school relations and relations with business and industry.

The at-risk student remains a prime concern to both segments. This student is described as being somewhat motivated, but one who lacks the skills and the fundamentals in order to cope with institutional demands. In many cases, at-risk students have potential for success but need appropriate programs, intervention, counseling, and reinforcement. Early identification accompanied by appropriate educational guidance of these students is one of the most important factors for ensuring their success.

Most Significant Issues Related to Administering Career-Vocational Programs

Finding: Community college and secondary school CEO's overwhelmingly identify two major issues related to the effective administration of career-vocational programs: inadequate state funding and the high student drop-out rate. These items are followed by inadequate facilities and a short supply of qualified faculty.

Policy Implication: It is ironic that in a state whose economy is ranked sixth in the world, there is a paucity of funding to support properly the training of its work force. Obviously, there needs to be a reordering of fiscal priorities in order to ensure the future of California's economic development. The competition among policy makers and state educational leadership, in many instances, has paralyzed the appropriation of adequate fiscal resources to support the institutions' programs and services.

The high student drop-out rate is symptomatic of failure of the system to deliver effectively those skills which students need in order to survive. Most individuals will attempt to avoid continual punishment, and consistent failure is the cruelest form of punishment. Again, early recognition and appropriate intervention for those students experiencing difficulty appear to have the most salubrious effects on improving student persistence.

State leadership, both political and educational, need to participate in intensive negotiations in order to provide sufficient funds to support career-vocational education. Accountability will be a prime issue, but without increased support for programs and staff, there is only the status quo, and the status quo is unsatisfactory.

In addition, both colleges and secondary schools are troubled with the high rate of student drop-outs. In response to this growing student phenomenon, colleges and secondary schools have instituted a variety of "mechanisms"

to identify the potential drop-out. However, the problem is not in identifying this potential drop-out; the problem is that the accompanying appropriate learning strategies needed to retain these students have not been developed or instituted. Once at-risk students have been identified, the needed support services for these students are not in place. Therefore, students abandon the institution in which they are not successful.

In addition, both colleges and secondary schools must actively seek the help of adjunct faculty from business and industry. These individuals are not only knowledgeable about labor market needs but can provide a strong liaison between the schools with business and industry.

Suggested Solutions to Improving the Delivery of Career-Vocational Programs

Finding: All respondents identified three major solutions that would help improve the delivery of career-vocational courses: (1) establish strong articulation agreements between community colleges and secondary schools beyond those outlined in 2+2 arrangements, which should be instigated by the lead administrative officers; (2) provide opportunities for faculty teaching within the same disciplines in both segments to meet frequently in order that a joint curriculum continuum can be developed; and (3) improve the mechanisms for marketing effectively the value and benefits of career vocational education.

Policy Implication: The call for strong statewide and institutional leadership appears to be the most consistent and significant factor related to providing an avenue for all three suggested solutions. Without the cooperation and coordination of institutional leadership, none of the three solutions can be implemented.

Institutional leadership needs the support of a state leadership that openly advocates the worth and value of career-vocational education. Both statewide and locally, career-vocational education programs need to be recognized as equal with all other educational programs, and sufficient fiscal support needs to be provided to these programs. Transfer education, a primary mission for both community colleges and secondary schools, is not limited to students involved in the liberal arts but involves students in career-vocational education as well.

All community college and secondary school CEO's agree that effective institutional leadership demands their advocacy of career-vocational education within the institution and with local business and industry outside the institution. Advocacy must become a top priority for these leaders.

Secondly, CEO's feel that they need to reorder the priorities in their own institutions by placing career-education on an equal par with traditional "academic" preparation, and that institutions, with the guidance of state leadership, should grant graduation credit for career-vocational courses. The imaginary line that continues to divide the disciplines is doing a general disservice to career-vocational faculty and students.

Third, CEO's feel that they need to lend their support by their visibility. Often career-vocational faculty and students feel isolated from the rest of the institution unless the CEO takes a direct interest by actually visiting the program site and by supporting the program's co-curricula activities.

Fourth, the CEO needs to take a proactive role in overseeing the institution's student recruitment process and the institution's development of program marketing materials. Careful attention needs to be given to the dissemination of information which is equally attractive to underrepresented students and their families.

Fifth, the CEO must actively support institutionalized staff development and staff renewal programs in order to insure that the faculty have the opportunity to improve their skills and to update their knowledge. This staff development must include the counseling staff, especially those in career counseling assignments.

Sixth, the CEO should encourage scheduling flexibility and program experimentation in order that career-vocational programs are offered in convenient and attractive time slots. Diversification of students should have a direct effect on the development and design of a diversified course scheduling program.

Seventh, CEO's should support strong student assessment programs which are designed for the benefit of all students. Every effort should be made by the institution to accommodate students with learning differences and difficulties.

And finally, CEO's must support institutional research and planning which will guide them in making thoughtful and workable decisions concerning the present condition of the institution and its future effectiveness.

The institutional leader assumes both the educational and moral responsibility to ensure the welfare of students and staff, and in many ways, the institutional leader can be one of the major contributors to the economic development of California's work force.

Whether California's two largest public education segments can meet the challenges outlined in this blueprint remains a question at this time; however, one deduction is obvious—neither one of the two segments can do it alone. Perhaps this statement presents the strongest argument for accelerating the partnership between community colleges and secondary schools.

Teaching Assignments — Vocational Education (Elementary, Secondary and Adult only)

Agriculture

4010 Agricultural plant production
4020 Agricultural animal production & processing
4030 Agricultural mechanics
4040 Agricultural business management
4050 Horticultural production
4060 Forestry and natural resources
4070 Basic agriculture (first year)
4080 Basic agriculture (second year)
4097 General agriculture (any of gr 7-8)
4098 Other agriculture course
4099 Department chair

Business Education - Marketing

4100 Advertising services
4101 Apparel and accessories
4102 Automotive and parts marketing
4103 Financial services
4104 Floristry
4105 Food distribution
4106 Restaurant marketing
4107 General merchandise retailing
4108 Hardware/building materials
4109 Home furnishings
4110 Industrial marketing
4112 Insurance marketing
4113 International trade
4115 Petroleum products marketing
4116 Real estate marketing
4117 Recreation and travel
4118 Transportation
4121 Small business ownership and management
4122 Marketing fundamentals
4197 General marketing (any of gr 7-8)
4198 Other marketing courses
4199 Department chair

Business Education - Office

4600 Accounting/computer accounting
4601 Computer occupations
4605 Receptionist
4606/07 Secretarial/stenographic occupations
4609 Supervisory/administrative management
4610 Clerk typist
4613 General office occupations
4614 Word processing operations
4620 Medical office occupations
4621 Legal office occupations
4630 Business economics/management
4697 General office (any of gr 7-8)
4698 Other office/computer courses
4699 Department chair

Consumer and Homemaking Education

4310 Exploratory homemaking (gr 6-8)
4311 Comprehensive home economics I (gr 9-12)
4312 Comprehensive home economics II (gr 9-12)
4320 Child growth and development (gr 6-8)
4321 Introductory child growth and development (gr 9-12)
4322 Advanced child growth and development (gr 9-12)
4330 Clothing and textiles (gr 6-8)
4331 Introductory clothing and textiles (gr 9-12)
4332 Advanced clothing and textiles (gr 9-12)
4340 Consumer education (gr 6-8)
4341 Introductory consumer education (gr 9-12)
4342 Advanced consumer education (gr 9-12)
4350 Family living and parenthood (gr 6-8)
4351 Introductory family living and parenthood (9-12)
4352 Advanced family living and parenthood (9-12)
4360 Food and nutrition (gr 6-8)
4361 Introductory food and nutrition (gr 9-12)

Consumer and Homemaking Education *(continued)*

4362 Advanced food and nutrition (gr 9-12)
4371 Introductory home management (gr 9-12)
4372 Advanced home management (gr 9-12)
4380 Housing and home furnishings (gr 6-8)
4381 Introductory housing and home furnishings (gr 9-12)
4382 Advanced housing and home furnishings (gr 9-12)
4390 Individual and family health (gr 6-8)
4391 Individual and family health (gr 9-12)
4398 Other consumer and homemaking courses (gr 9-12)
4399 Department chair

Health Careers

4224 Introduction to career in health care
4230 Dental auxiliary core
4231 Dental receptionist/front office
4232 Dental chairside assistant
4233 Dental laboratory technician
4234 Dental assistant
4235 Dental assistant continuing education
4238 Medical assistant core
4240 Medical administrative assistant/front
4241 Medical clinical assistant/lab
4242 Medical assistant
4243 Medical assistant continuing education
4245 Hospital/community health services core
4246 Hospital/community health services occupations
4247 Hospital/community health services continuing education
4248 Emergency medical technician I
4249 Emergency medical technician II
4250 Emergency medical technician-paramedic
4255 Supportive services assistant/technician
4260 Therapeutic assistant/technician
4261 Sports injury and health fitness assistant
4265 Diagnostic assistant technician
4270 Medical - clerical core
4271 Health unit coordinator
4272 Medical records clerk
4274 Transcriptionist
4275 Insurance clerk
4276 Medical - clerical occupations
4277 Medical - clerical continuing education
4280 Nursing core
4281 Home health aide
4282 Nurse assistant - long term care/geriatric aide
4283 Nurse assistant - acute care
4284 Psychiatric aide/mental health aide
4285 Restorative aide
4286 Nurse assistant (+3000 hours)
4287 Rehabilitation technician
4291 Psychiatric technician
4292 Vocational nurse
4293 Geriatric technician
4294 Nursing continuing education
4297 General health career (any of gr 6-8)
4298 Other health courses
4299 Department chair

Home Economics Related Occupations

4400 Child care and guidance, management and services
4410 Clothing, apparel, textiles, managment production & services
4420 Food production, managment and services
4430 Residential and commerical furnishings and equipment management, production and services
4440 Institutional, home management and supporting services
4497 Home economics related occupations (any of gr 7-8)
4498 Other home economics related occupations course
4499 Department chair

Industrial & Technology Education

Construction Technology

5501 Construction technology level 1
5502 Construction technology level 2
5503 Apartment and home repair/remodeling
5504 Boat building
5505 Brick, block and stonemasonry
5506 Building mechanical
5507 Carpentry
5508 Concrete placing and finishing
5509 Construction equipment operation
5510 Cooling and refrigeration
5511 Drywall installation
5512 Electrician
5513 Floor covering installation
5514 Furniture making
5515 Glazing
5516 Heating and air conditioning
5517 Insulation installation
5518 Lineworker
5519 Locksmithing
5520 Millwork and cabinet making
5521 Painting and decorating
5522 Pipefitting and steamfitting
5523 Plastering
5524 Plumbing
5525 Roofing
5526 Stage technology level 1
5527 Stage technology level 2
5528 Structural and reinforcement metalwork
5529 Tile setting
5530 Upholstering
5531 Woodworking
5549 Other construction technology courses

Electronics Technology

5551 Electronics technology level 1
5552 Electronics technology level 2
5553 Avionics
5554 Biomedical equipment technology
5555 Business machine repair
5556 Communications electronics
5557 Computer electronics
5558 Computer service technology
5559 Electromechanical
5560 Electronics consumer products service
5561 Electronics technology
5562 Hybrid microelectronics
5563 Instrument repair
5564 Instrumentation technology
5565 Major appliance repair
5567 Motor repair
5568 Small appliance repair
5569 Other electronics technology courses

Participating Colleges

1. Antelope Valley College
2. American River College
3. Bakersfield College
4. Chabot College
5. College of the Desert
6. College of San Mateo
7. College of the Sequoias
8. Compton College
9. Cuesta College
10. El Camino College
11. Fresno City College
12. Grossmont College
13. Hartnell College
14. Laney College
15. Las Positas College
16. Long Beach City College
17. Modesto Junior College
18. Napa College
19. Rancho Santiago College
20. Riverside College
21. Saddleback College
22. Santa Barbara City College
23. Santa Rosa Junior College
24. Shasta College
25. West Los Angeles College

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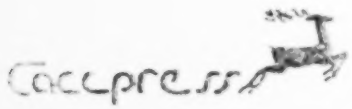

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